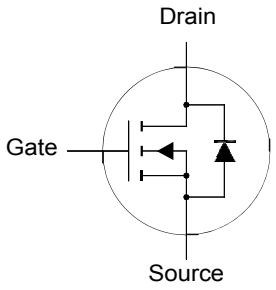
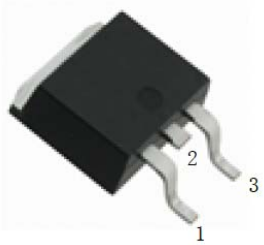
SFTN2922R

N-Channel Enhancement Mode MOSFET





1.Gate 2.Drain 3.Source
TO-252 Plastic Package

Absolute Maximum Ratings

Parameter		Symbol	Value	Unit
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Voltage		V_{GS}	± 20	V
Continuous Drain Current	T_C = 25℃ T_C = 100℃	I_D	7 5	A
Peak Drain Current [3]		I_{DM}	10	A
Power Dissipation [2]	T_C = 25℃ T_C = 100℃	P_D	17 8.5	W
Operating Junction and Storage Temperature Range		T_J,T_{stg}	- 55 to + 150	℃

Thermal Characteristics

Parameter		Symbol	Max.	Unit
Thermal Resistance from Juntion to Ambient [1]	(t ≤ 10 s)	$R_{\theta JA}$	25	℃/W
Thermal Resistance from Juntion to Ambient [1] [4]	(Steady-State)		50	℃/W
Thermal Resistance from Juntion to Case	(Steady-State)	$R_{\theta JC}$	8.8	℃/W

[1] The value of $R_{\theta JA}$ is measured with the device mounted on 1in2 FR-4 board with 2oz. Copper, in a still air environment with T_A =25° C. The Power dissipation P_{DSM} is based on $R_{\theta JA}$ t≤ 10s and the maximum allowed junction temperature of 150° C. The value in any given application depends on the user's specific board design, and the maximum temperature of 175° C may be used if the PCB allows it.

[2] The power dissipation P_D is based on $T_{J(MAX)}$=175° C, using junction-to-case thermal resistance, and is more useful in setting the upper dissipation limit for cases where additional heatsinking is used.

[3] Single pulse width limited by junction temperature $T_{J(MAX)}$=175° C.

[4] The $R_{\theta JA}$ is the sum of the thermal impedance from junction to case $R_{\theta JC}$ and case to ambient

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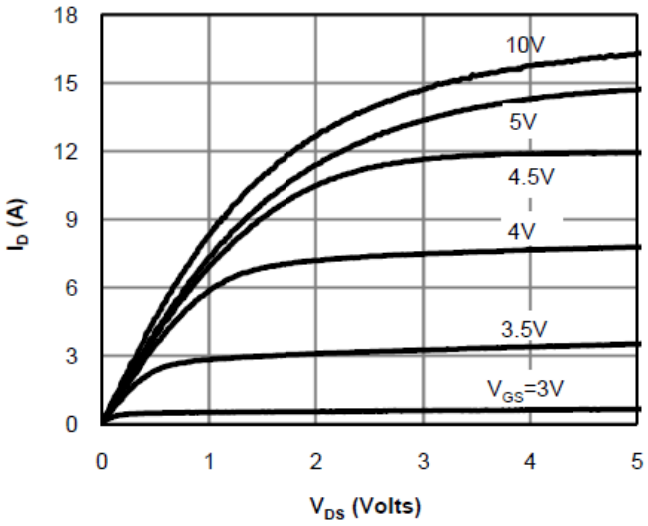
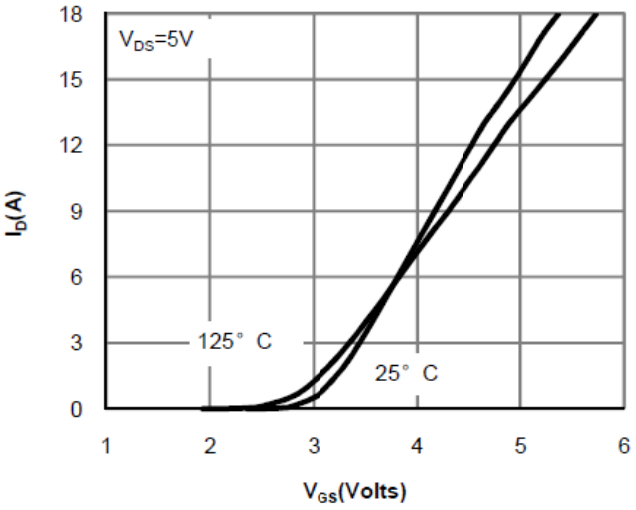
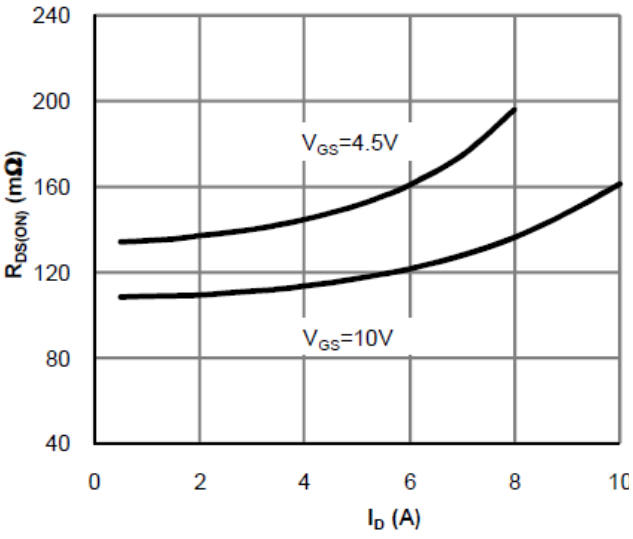
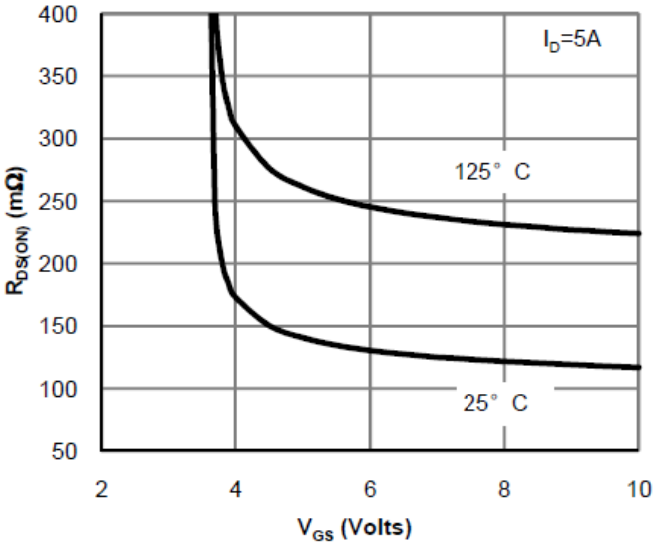
Characteristics at T_a = 25℃ unless otherwise specified

Parameter	Symbol	Min.	Typ.	Max.	Unit
Drain-Source Breakdown Voltage at I_D = 250 μA	BV_{DSS}	100	-	-	V
Gate-Source Threshold Voltage at V_{DS} = V_{GS}, I_D = 250 uA	$V_{GS(th)}$	1.7	-	2.7	V
Drain-Source Leakage Current at V_{DS} = 100 V at V_{DS} = 100 V ,T_J = 55℃	I_{DSS}	- -	- -	1 5	μA
Gate Leakage Current at V_{GS} = ± 20 V	I_{GSS}	-	-	± 100	nA
Drain-Source On-State Resistance at V_{GS} = 10 V, I_D = 4.5 A at V_{GS} = 10 V, I_D = 4.5 A,T_J = 125℃ at V_{GS} = 4.5 V, I_D = 3 A	$R_{DS(on)}$	- - -	- - -	140 270 176	mΩ
Diode Forward Voltage at I_S = 1 A, V_{GS} = 0 V	V_{SD}	-	-	1.1	V
Input Capacitance at V_{GS} = 0 V, V_{DS} = 50 V, f = 1 MHz	C_{oss}	-	-	310	pF
Output Capacitance at V_{GS} = 0 V, V_{DS} = 50 V, f = 1 MHz	C_{oss}	-	-	30	pF
Reverse Transfer Capacitance at V_{GS} = 0 V, V_{DS} = 50 V, f = 1 MHz	C_{rss}	-	-	8	pF
Turn-On Delay Time at V_{DS} = 50 V, R_G = 3 Ω, R_L= 10 Ω, V_{GS} = 10 V	t_{on}	-	5	-	ns
Turn-On Rise Time at V_{DS} = 50 V, R_G = 3 Ω, R_L= 10 Ω, V_{GS} = 10 V	t_r	-	3	-	ns
Turn-Off Delay Time at V_{DS} = 50 V, R_G = 3 Ω, R_L= 10 Ω, V_{GS} = 10 V	t_{off}	-	19	-	ns
Turn-Off Fall Time at V_{DS} = 50 V, R_G = 3 Ω, R_L= 10 Ω, V_{GS} = 10 V	t_f	-	5	-	ns









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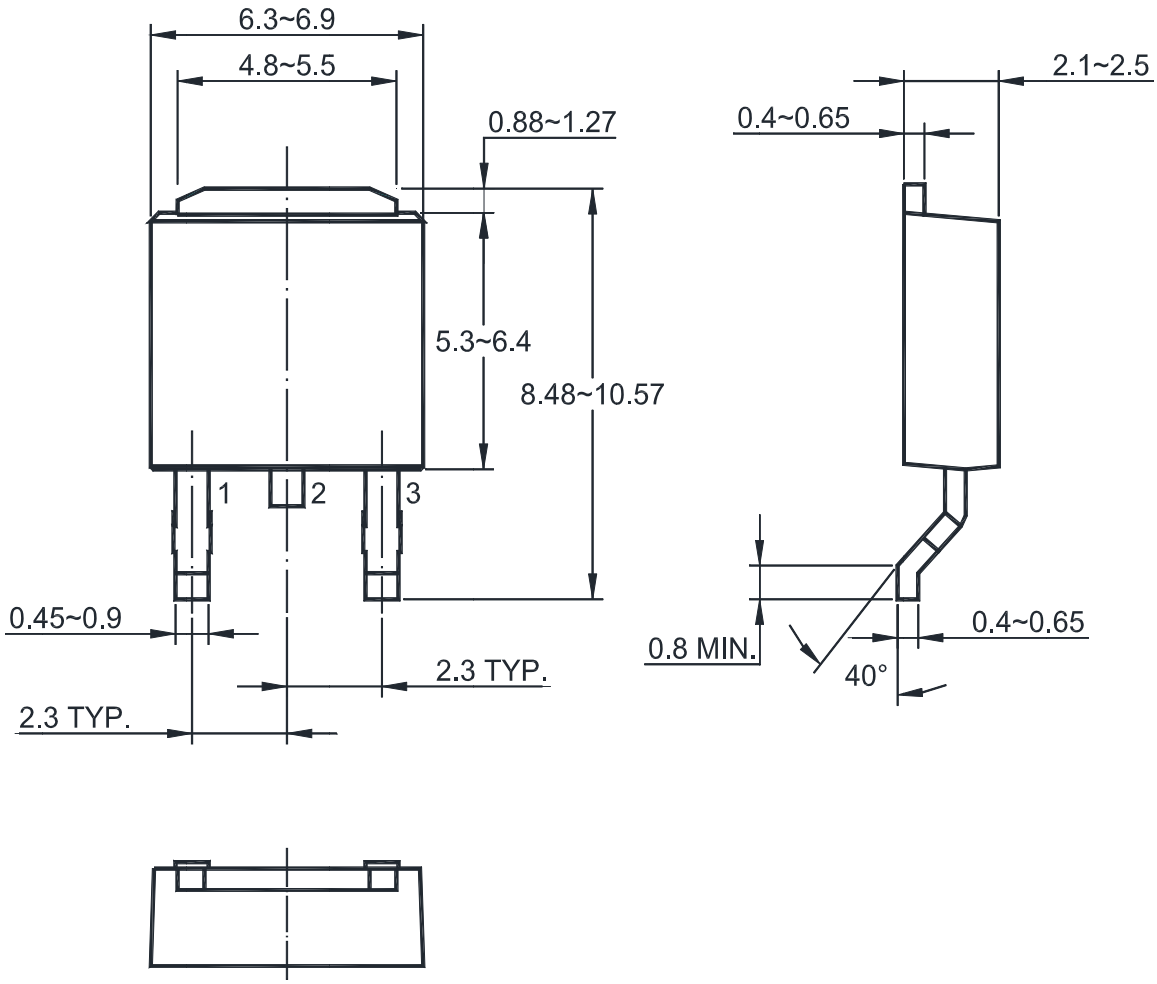
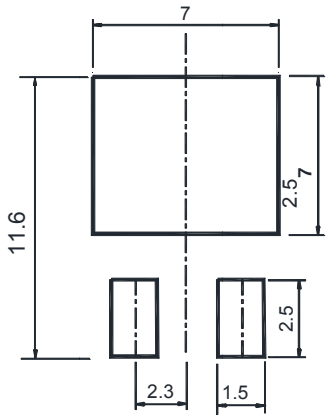
TO-252 PACKAGE OUTLINE



Recommended Soldering Footprint



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